



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,643	10/09/2007	Steven Kenneth Cook	102792-512 (11282P1 US)	9139

27389 7590 09/01/2010
PARFOMAK, ANDREW N.
NORRIS MCLAUGHLIN & MARCUS PA
875 THIRD AVE, 8TH FLOOR
NEW YORK, NY 10022

EXAMINER

ABRAHAM, AMJAD A

ART UNIT	PAPER NUMBER
----------	--------------

1791

MAIL DATE	DELIVERY MODE
-----------	---------------

09/01/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,643	Applicant(s) COOK ET AL.	
	Examiner AMJAD ABRAHAM	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14 and 26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1791

DETAILED ACTION

Applicant's remarks and amendments, filed on June 07, 2010, have been carefully considered. Claim 1 has been currently amended by applicant by applicant. Claims 1, 3-14, and 26 are still pending review in this application.

New Grounds of Rejection due to applicant's amendments to claim 1 in remarks filed on June 7, 2010.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 3-10, 13, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Raehse et al. (USP No. 5,382,377) in view of Brouwer et al. (USP No. 5,714,451).

Art Unit: 1791

4. Regarding claim 1, Raehse teaches a process for producing a cleaning composition **(detergent)** tablets via extrusion. **(See abstract).**

a. Comprising the steps

i. Forming of a premix which contains a cleaning composition particulate **(homogeneous detergent premix)** and a lubricant. **(See abstract and column 2 lines 58-67 disclosing that the premix is solid particulate detergents with additional liquid ingredients that may be a plasticizer and/or a lubricant.)**

ii. Adding the premix into an extruder. **(See column 2 lines 45-47, disclosing the addition of the premix into an extruder. Obviously, all extruders must have at least one feed port for the premix of material to be extruded.)**

iii. Adding a binder (plasticizer) --Raehse teaches the additional step of adding a plasticizer/lubricant **(which acts as a binder material)** to a detergent composition **(pre-mix)**. Raehse goes on to teach that the plasticizer/lubricant to be added; can be solid at room temperature and mixed with the premix while in the form of a liquid. **(See column 2 line 58 to column 3 line 46)**

(1) See specifically column 3 lines 1-10 disclosing that the plasticizers and/or lubricants can be paste-like **(Solid)** at room temperature.

- (2) See specifically column 3 lines 1-10 and 10-23 disclosing that the plasticizers/lubricants **(binder)** can be liquid phase.
- (3) Raehse teaches that surfactants and/or polymers can be used as plasticizers/lubricants. **(See column 3 lines 24-35).**
- Furthermore, Raehse teaches that the surfactant components act as binder-like surface layers that are responsible for the cohesion of the granules. **(See column 3 lines 36-46).**
- iv. Extruding the premix once in the extruder. **(See column 2 lines 45-47 describing an extrusion process with a perforated die for extruding the detergent strands.)**
- v. And finally cutting the detergent strands into particulate. **(See column 2 lines 55-57).**
- b. With respect to claim 1, Raehse does not expressly teach wherein the cut detergent strand particulates are tablets.
- c. However, Brouwer teaches an extrusion process similar to that of Raehse which discloses that depending on the extrusion die head adapted to an extrusion process the extrudate may be formed into flakes (particulate – similar to Raehse), tablets, pellets, ribbons, or threads. **(See column 24 lines 58-67).**
- d. It would have been obvious for one having the ordinary skill in the art to modify the extrusion die of Raehse in order to produce, flakes, tablets, pellets, or ribbons depending on the intended use of the end product since Brouwer teaches that a similar extrusion/die system can be used to produce tablets.

Art Unit: 1791

Depending on the materials in the premix, it would have been obvious to one having the ordinary skill in the art to make the extrudate directly into useable tablets to save processing/cycle time and equipment costs.

2. Regarding claims 3-5, Raehse teaches that the extrusion pressure is between 25 to 200 bars **(2.5 to 20 MPa)**.

3. Regarding claim 6, Raehse teaches the use of a twin-screw extruder. **(See column 5 lines 30-35)**.

e. With respect to claim 6, Raehse does not expressly teach wherein the twin screw extruder has screw overlap **(essentially the screws are intermeshing)** and that the extruder is configured to advance the extrudant.

vi. However, it is well known in the art that a twin screw extruder can be used to meter or mix an extrudant material. It is well known in the art of twin screw extruding that the screws can be intermeshing or non-intermeshing. An intermeshing screw has screw overlap and this overlap can be modified in order to minimize the shearing action that takes place between the rotating screws. Because of this, claim 6 would have been obvious to one having the ordinary skill in the art because a person of ordinary skill has good reason to pursue known options within his or her technical grasp. In this case, it would have been obvious to try an intermeshing screw with minimal screw overlap because using a twin screw for metering rather than shearing is a common endeavor solved by altering the intermeshing screws.

Art Unit: 1791

4. Regarding claims 7 and 8, Raehse teaches that the strand is subjected to a post-extrusion enhancement process such as post-extrusion cooling. **(See column 5 lines 60-67 disclosing that the strands are cooled post extrusion and column 2 line 57 disclosing that the strands can be cut post extrusion.)**

5. Regarding claim 9, Raehse teaches wherein the material mixed within the twin screw extruder at a temperature of 60 to 70C and as low as 40C. **(See column 5 lines 8-21)**

6. Regarding claim 10, Raehse discloses wherein the lubricant is fluid at room temperature. **(See column 3 lines 1-10).**

f. However, Raehse while does not explicitly disclose wherein the lubricant is liquid, this would have been obvious. When describing a material as fluid it is likely that the material will be gas phase fluid or liquid phase fluid. However, it would be unlikely that a gaseous phase lubricant would be used in an extruder because the lubricant is supposed to intermingle with the solid particulate and facilitate a free flowing premix. Therefore, it would have been obvious to use a liquid lubricant.

7. Regarding claim 13, Raehse discloses wherein the surfactant that acts like a binder-like substance is typically a paste-like or gel-like substance. **(See column 3 lines 29-46)**

g. With respect to claim 13, Rae does not expressly state that the binder is molten under extrusion conditions.

Art Unit: 1791

vii. However, it would have been obvious to ensure that the binder was molten during extrusion because it is well known in the art that there is severe wear and tear on an extruder that attempts to extrude any material that is not in a molten state.

8. Regarding claim 26, Raehse teaches wherein the strand or pellets can be cooled after extrusion or separated into tablets. **(See column 5 lines 40-42 and 62-67).**

9. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raehse et al. (USP No. 5,382,377) in view of Brouwer et al. (USP No. 5,714,451) in view of Hoffmann et al. (US Pre-Grant Publication 2002/0015730 A1).

10. Regarding claims 11 and 12, Raehse/Morrison does not explicitly teach: (1) wherein the lubricant comprises a sucrose ester or a sorbitan ester and (2) wherein the lubricant comprises a sucrose oleate.

h. However, Hoffmann teaches: (1) wherein the lubricant comprises a sucrose ester. **(See paragraph [0044] disclosing that sucrose esters can act as a lubricant and are suitable for granulating)** and (2) wherein the lubricant comprises a sucrose oleate. **(See paragraph [0057] disclosing the use of sucrose oleates with sucrose esters).**

i. Raehse and Hoffmann are from the same field of endeavor which is making tablets by adding a lubricant/binder to facilitate tablet formation. At the

Art Unit: 1791

time of the invention, it would have been obvious to one having the ordinary skill in the art, having the teachings of Raehse and Hoffmann before him or her, to modify the teachings of Raehse to include the teachings of Hoffmann for the benefit of utilizing a lubricant as a mold release (See paragraph [0035]). It is submitted that it is common knowledge to use lubricants such as sucrose esters in extrusion processes to control frictional properties of the plasticized materials. Furthermore, sucrose ester is a nonionic surfactant (see paragraph [0045]) which is a well known suitable lubricant in extrusion operations. Moreover, Raehse identifies that nonionic surfactants can be used as lubricants. **(See column 3 lines 1-10 in Raehse).**

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raehse et al. (USP No. 5,382,377) in view of Brouwer et al. (USP No. 5,714,451) in view of Morrison (USP No. 6,770,609).

12. Regarding claim 14, Raehse does not explicitly teach wherein the binder is polyethylene glycol.

j. However, Morrison teaches wherein the binder is polyethylene glycol.

(See column 5 lines 7-14).

k. It is well known in the art of extrusion to use PEG as a binder. Therefore, it would have been obvious to use PEG as a binder to facilitate cohesion of the premix particulates.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-14, and 26 have been considered but are moot in view of the new ground(s) of rejection.
6. **Applicant Argument #1:**
 - a. Applicant has argued that the process of Raehse would not form tablets ready to use as detergent tablets because Raehse's discloses a post processing the particulate into a tableting machine.
7. **Examiner Response #1:**
 - b. As the claim is written the extruded material just needs to be cut into tablets and then **adapted** for use in a ware washing machine. "Adapted" is defined as to make suitable; to fit, or suit; to adjust; to alter so as to fit for a new use. **(See attached Dict.org definition of Adapted)**. Therefore applicant's claim 1 leaves open the possibility that the cut particulate/tablet is further processed before making the final detergent tablet placed into a ware washing machine.
8. **Applicant Argument #2:**
 - c. With respect to claims 11-12, one having the ordinary skill in the art would not have combined Hoffmann with Raehse because they are drawn to the pharmaceutical and detergent art respectively.
9. **Examiner Response #2:**

Art Unit: 1791

d. In response to applicant's argument that Hoffmann is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the particular problem is using lubricants such as sucrose esters in extrusion processes to control frictional properties of the plasticized materials. Furthermore, sucrose ester is a nonionic surfactant (see paragraph [0045]) which is a well known suitable lubricant in extrusion operations. Moreover, Raehse identifies that nonionic surfactants can be used as lubricants. **(See column 3 lines 1-10 in Raehse)**. Additionally, Hoffmann's teaching is relevant to the tablet making art. **(See paragraph 0001)**.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1791

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMJAD ABRAHAM whose telephone number is (571)270-7058. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AAA

Application/Control Number: 10/566,643

Page 12

Art Unit: 1791

/Philip C Tucker/

Supervisory Patent Examiner, Art Unit 1791